

delivery vector and the DNA delivered specifically to tumor tissues under anaerobic conditions is expressed in the tumor tissues.

A 4. (Amended) The method as claimed in Claim 3, wherein the DNA is selected from the group consisting of:

(a) DNA coding for a protein having an antitumor activity, and

(b) DNA coding for a protein having an activity of converting a precursor of an antitumor substance into the antitumor substance.

12. (Amended) The method as claimed in any one of Claims 3 to 11, wherein the bacterium is *Bifidobacterium longum*.

A 5 13. (Amended) The method as claimed in any one of Claims 3, 4 or 6 to 11, wherein the bacterium is *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

14. (Amended) A method for expressing a gene coding for a protein having an antitumor activity in tissue tumors specifically, which comprises use of the bacterium as claimed in any one of Claims 3 to 5 or 8 to 11.

15. (Amended) A method for expressing a gene coding for a protein having the activity of converting a precursor of an antitumor substance into the antitumor substance in tissue tumors

specifically, which comprises use of the bacterium as claimed in any one of Claims 3, 4 or 6 to 11.

16. (Amended) A pharmaceutical composition comprising the bacterium as claimed in any one of Claims 3 to 11.

17. (Amended) A pharmaceutical composition comprising a combination of the bacterium as claimed in any one of Claims 3, 4 or 6 to 11 and the precursor of an antitumor substance.

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18. (Amended) A pharmaceutical composition comprising the bacterium as claimed in any one of Claims 3, 4 or 6 to 11 and the precursor of an antitumor substance.

19. (Amended) The pharmaceutical composition as claimed in Claim 16, wherein the bacterium is *Bifidobacterium longum*.

20. (Amended) The pharmaceutical composition as claimed in Claim 19, wherein bacterium is *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

21. (Amended) A bacterium belonging to the genus *Bifidobacterium*, which is used in the method as claimed in any one of Claims 3 to 11.

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22. (Amended) A bacterium *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

24. (Amended) A method of treating a solid tumor, which comprises use of the method as claimed in any one of Claims 3 to 11.

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25. (Amended) A method of treating a solid tumor, which comprises administering the bacterium as claimed in any one of Claims 3, 4 or 6 to 11 in combination with the precursor of an antitumor substance.

Please add the following new claims.

28. A method of specifically delivering to tumor tissues under anaerobic conditions a genetically modified bacterium, wherein the genetically modified bacterium is a *Bifidobacterium longum*, which comprises a DNA sequence coding for a protein.

29. The method as claimed in Claim 28, wherein the DNA sequence codes for a protein having anti-tumor activity.

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30. The method as claimed in Claim 28, wherein the genetically modified bacterium comprises an expression vector comprising a DNA sequence coding for a protein.